

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Official Action of March 7, 2006.

Claim 1 has been amended to more particularly point out and distinctly claim Applicants' contribution to the art. Thus, claim 1 now recites a case for accommodating the electric generator and the motor and also recites the generator rotor. Claim 1 now also recites the clutch provided in the engine-power transfer channel.

It is noted that claims, 3, 5-7 and 9-11 have been withdrawn from further consideration. Applicants reserve the right to file a divisional application(s) to adequately protect the subject matter disclosed herein.

A replacement FIGURE 5 is filed herewith.

Briefly summarized the present invention relates to a driving apparatus, wherein the rotor 23 of the electric generator 25 is attached to the crankshaft 22 of the engine 13 and is directly driven by the engine 13. See FIGURE 2. The engine-side input shaft 18 is linked to the crankshaft 22 through the rotor 23 of the electric generator 25. Therefore, when the clutch incorporated in the transmission 36 is shifted to the power cutoff state and the motor power is transmitted to the driving-wheels 17 through the motor-power transfer channel 40b, it is possible to transfer all of the engine power to the electric generator 25. That is, while the vehicle is traveling under the power of the motor 14, the electric generator 25 is driven by the engine 13 and all of the engine torque is transmitted to the electric generator 25, thereby making it possible to generate electrical power. Thus, the rotor 23 of the electric generator 25 is directly driven by the crankshaft 22, i.e., without interposing power transmitting members such as gears and belts, so that the electric generator 25 can efficiently generate the electric power without causing power transfer losses.

In the engine-power transfer channel 40a, there is provided the transmission 36 for changing the revolution speed of the engine-power transfer channel 40a to a plurality of shift

ranges. Accordingly, when the engine power is transmitted to the vehicle, the shift range of the transmission 36 can be changed depending on the traveling speed, i.e., the driving force of the vehicle can be changed by changing the revolution speed of the engine-power transfer channel 40a. The features of the present invention as described above are not shown or suggested by the cited prior art.

The rejection of claims 1, 2, 4, 8 and 12-17 under 35 U.S.C. § 102(e) in view of Kawabata U.S. Patent No. 6,520,879 is traversed and reconsideration is respectfully requested.

Kawabata et al disclose the power transmission apparatus having the clutch motor 30 and the assist motor 40, See FIGURE 1. The clutch motor 30 is provided with the inner rotor 32 connected to the crank shaft 56 of the engine 50, and the outer rotor 34 connected to the drive shaft 22. The assist motor 40 is provided with the rotor 42 connected to the switch apparatus 80, and the stator 44.

When the movable gear 84 of the switch apparatus 80 is engaged with the first gear 81, the rotor shaft 43 is connected to the outer rotor 34 and the power transfer channel is shifted to the under-drive connection as shown in FIG 2. When the movable gear 84 is engaged with the second gear 82, the rotor shaft 43 is connected to the inner rotor 33 and the power transfer channel is shifted to the over-drive connection as shown in FIG. 3. When the movable gear 84 is engaged with the third gear 83, the motor torque of the assist motor 40 is not transferred to the driving wheels 26 since the movable gear 84 is engaged with the third gear 83. As described above, since the switch apparatus 80 is provided in order to change the power transfer channel of the assist motor 40, the switch apparatus 80 cannot change the speed of the driving wheels 26.

In the apparatus disclosed in Kawabata et al, when generating electric power by the clutch motor 30 and/or the assist motor 40, engine torque must be transferred to the driving wheels 26, so that it is impossible to transfer all of the engine power to the clutch motor 30 and/or the assist motor 40 for generating the electric power.

Therefore, Kawabata et al do not teach or suggest the present invention, which can transfer the full power of the engine to the rotor 23 of the generator 25, namely, which can generate the electric power by transferring all of the engine torque to the rotor 23 of the electric generator 25 while the vehicle is traveling by the motor power.

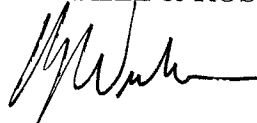
It is to be particularly noted that Kawabata et al do not show the generator rotor of the electric generator arranged in the stator of the electric generator being attached to the crank shaft of the engine to be directly driven by the engine, as pointed out in claim 1.

Applicants respectfully submit that the cited reference fails to describe the claimed invention within the meaning of 35 U.S.C. § 102(e). Therefore, the rejection of the claims should be withdrawn and the claims be allowed.

Favorable action at the Examiner's earliest convenience is respectfully submitted.

Respectfully submitted,

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